Citizens of Ebey's Reserve (COER) Comments:

Draft Environmental Impact Statement

for Naval Air Station Whidbey Island

Addendum 3:

Failure to Address PFC Contamination of Drinking Water

Prepared for COER by Rick Abraham

The National Environmental Policy Act, as implemented by Council on Environmental Quality Regulations, requires that Environmental Impact Statements evaluate the potential environmental impacts on identified resource areas. Those resource areas include *water resources.* As stated in the DEIS, water resources includes *groundwater.* It is described as*,* "water that flows or seeps downward and saturates soil or rock, supplying springs and wells. Groundwater is typically found in aquifers with high-porosity soil where water can be stored between soil particles and within soil pore spaces.[1] Such is the groundwater beneath the areas of the proposed project areas at Ault Feld and the OLFC. This water resource is used for both water consumption and agricultural irrigation.

In May 2016, the U.S. Environmental Protection Agency (EPA) issued lifetime health advisory levels for two PFAS, specifically perfluorooctane sulfonate, PFOS, and perfluorooctanoic acid, PFOA, at 70 parts per trillion, individually and combined. In March, the Navy provided the Ebey's Landing National Historcal Reserve with a request/notification that the Navy wanted to drill wells at OLFC. In August, 2016, the Navy held a meeting on August 18th of the Installation Restoration Program Restoration Advisory Board. During the meeting it was reported that the EPA made it clear to the Navy that the Navy was responsible for the plume of contamination at NASWI advancing 400 feet per year because of Joint & Several Liability. During this presentation, emerging contaminates, (PFAS's) were discussed. On November 10th, about 100 homeowners in a 1-mile radius of OLFC received a letter from the Navy that their wells might be contaminated and they should have their well water tested. This was the same week the Navy released its DEIS to the public. In the DEIS, water issues are dismissed as not relevant to the Growler DEIS process. Clearly from the timeline, the Navy was planning for an investigating of PFAS's at OLFC and Alt Fields for probable contamination and did not want citizens weighing in on this issue. We believe the Growlers, the increase of Growlers, and FCLP's at OLFC are connected to the ground water contamination issue.

Naval Air Station Whidbey Island already has its hands full with a designated superfund site that

[1] NAS Whidbey Island Complex Growler DEIS, Volume 1 November 2016

will have less EPA oversight in the coming year. The EPA has recently announced that no superfund sites will receive funding in 2017. This is not good news for citizens.

WA5170090059	Naval Air Station, Whidbey Island (Ault)	Island	Ault Field groundwater is contaminated by VOCs including TCE and TCA. Soils and sediments are contaminated by PCBs, heavy metals, pesticides, PAHs and dioxins.[52]	09/18/1985	02/21/1990	09/25/1997	–	–
WA6170090058	Naval Air Station, Whidbey Island (Seaplane)	Island	Soil in areas of the seaplane base was contaminated by heavy metals including lead and arsenic, pesticides and PAHs. Contaminated soil has been removed; possible remaining groundwater, surface water and sediment contamination is not thought to pose a risk to human health or the environment.[53]	09/18/1985	02/21/1990	06/29/1995	–	09/21/1995

The DIES falsely concludes, in a single paragraph of its Executive Summary, that the proposed action would have no significant impact on Water Resources. The only water resource in Central Whidbey is the ground water that supplies fresh water to most of the people and businesses of Central Whidbey and beyond. There are no surface water resources – no creek, rivers or streams in Central Whidbey. The Navy's narrow conclusion is based only the assessment of the potential impacts from "construction activities."

The DEIS fails to address the potential impacts from the *operations* associated with the Growlers. Those operations include takes-offs, landings, and Field Carrier Landing Practice (FCLP). Included in these operations are *planned responses to accidents* and *preparedness training for those accidents,* both of which can involve the releases of toxic chemicals to groundwater. Equipment such as fire trucks are a regular part of FCLP procedures and are present during all Navy flight training at OLFC.

Although the DEIS touches on the use of best management practices (BMP) to mitigate "spills" associated with "construction activities", it does *not* address mitigations of spills or releases associated with *operational activities*. Releases of contaminants, including PFASs, are known to have adverse impacts far beyond areas of construction and operational activities. Further, these chemicals are in the fire-retardant foam carried on Navy fire trucks that would extinguish aircraft fires, should they occur.

Because groundwater travels through aquifers, or is drawn from aquifers for transport to other

areas, contamination can have significant adverse impacts far beyond the point of contamination. The USEPA has designated the Whidbey Island aquifer system as a sole-source aquifer: it is the only supply of potable water for at least half of the island's residents. There is no viable alternative source of drinking water for those using groundwater, and the aquifer boundaries have been defined (URS, 1995).

The City of Oak Harbor relies on three municipal wells that draw from the aquifer for 25% of its drinking water. Residents near Ault Field who are not located in the Oak Harbor water district use private wells that draw from the aquifer. The Town of Coupeville relies on water drawn from the aquifer for 100% of it drinking water, as do more than one-hundred private well owners in the area of OLFC. The potential for serious impacts to groundwater by Growler operations proposed in the DEIS are evidenced by the adverse impacts that have already occurred. Additional risks are unwarranted and will be expensive for the Navy to mitigate.

The groundwater beneath Ault Field and the OLFC are contaminated with the Navy's toxic chemicals. Identified chemicals of concern have migrated off-site where they have contaminated public and private drinking water supplies. The severity of those impacts is such that private well owners living near Ault Field and the OLFC have been provided bottled water by the Navy and advised by both the Navy and regulatory agencies not to drink or cook with the water from their wells. The Town of Coupeville has been forced to curtail the use of its primary drinking water well and rely more heavily on wells that, if not already contaminated, are in danger of contamination. The Town's water system now provides approximately 800 in-town customers and over 250 out-of -town customers with water containing the Navy's toxic chemicals. This includes the Island County hospital, the County offices and jail, restaurants and business in the state's 2nd oldest town of Coupeville, and three schools.

The adverse impacts from the Navy's pollution did not result from "construction activities." They resulted from activities associated with jet training operations at both sites.

The proposed increases in numbers of EA-18G operations under all of the proposed action alternatives will increase the risks of additional impacts. Those risks have yet to be assessed and are ignored in the DEIS. No jets should be allowed at OLFC until the fire-retardant contamination is removed from the water that has been contaminated by the Navy.

Source of Contamination

The source of PFAS contamination at Ault Field and OLFC is a PFAS-containing fire suppressant known as Aqueous Film-Forming Foam (AFFF). Data on PFC drinking water contamination are collected under the EPA's Unregulated Contaminant Monitoring Rule (UCMR) shows 664 fire-or-crash-training sites, identified by the Department of Defense, where AFFF was used, often for decades.

The Navy's investigation of PFAS contamination at Ault Field is centered on fire training and other areas where AFFF was known to have been used or may have been used. Based on Island

County real estate records, 177 parcels are located downgradient of the identified sites, of which 66 are documented as served by private wells. It is unknown whether the remaining parcels are served by private wells.[2]

The Navy's PFAS investigation at OLFC was extended to off-site areas after PFAS chemicals were found in an OLFC drinking water well. Based on Island County records, there are approximately 350 properties and over 100 private wells located within a mile of a single point at the OLFC where PFAS contamination was discovered. As of January 30, 2017, the Navy still claimed to have no record of the use of AFFF at OLFC. Those claims are contradicted by eyewitness accounts. The Navy held an 'Open House' public meeting in the community to explain its off-site investigation plans but made no effort to obtain information from the community about the use, storage, or disposal of AFFF at the OLFC. The Navy's on-site investigation plan for the OLFC identifies the location of the on-site contaminated well as a "source" and further states, "Additional suspected source areas include the runway and storage buildings located east of the runway."[3]

Continued Threat to Drinking Water Resources

The Navy has made it made clear its intention to continue its use of AFFF, even though alternatives are available. Contrary to representations being made to the public, AFFF is still being used at the Ault Field fire training school as stated in the Navy's January 17 on-site investigation plans. Should there be an accident at the OLFC, Navy firefighters will apply AFFF and further jeopardize drinking water supplies for hundreds of families. The threat posed to the Town of Coupeville's main drinking water supply-well, which serves over one thousand homes, is located adjacent to the OLFC runway. Because PFCs are unregulated, the law doesn't require their cleanup — and the costs of getting them out of the environment aren't covered by the Superfund program, so if the water is contaminated further by a crash, should the town or homeowner have to pay for the Growler crash risk? Certainly one single source aquifer is of equal or greater value than increased FCLP's at a non-conforming site that has a variety of other Navy alternatives.

The Navy's proposed increases in Growler operations will increase the potential for an accident and contamination of drinking water supplies for all of Central Whidbey, including three schools, the hospital, the County offices and the restaurants and businesses of Coupeville.

Contaminating Whidbey Island's only aquifer is not worth the Safety Risk of a Growler Crash

From the DEIS, page 4-261: "... *While it is generally difficult to project future safety/mishap rates for any aircraft, the Growler has a well-documented and established safety record as a*

[2] Investigation of Perfluorinated Compounds in Drinking Water, Sampling and Analysis Plan, Naval Air Station Whidbey Island, Oak Harbor, Washington, January 2017

[3] SAMPLING AND ANALYSIS PLAN SITE INSPECTION FOR PERFLUORINATED COMPOUNDS IN GROUNDWATER, OUTLYING LAND FIELD COUEVILLE, NAS WHIDBEY ISLAND, COUPEVILLE, WASHINGTON, JANUARY 2017, Page 30

reliable aircraft."

This quote is the extent of effort expended on an accident risk analysis in the DEIS! Yet a thorough risk analysis (while *"difficult to project"*) *must* accompany every credible EIS. An EIS must include treating a "maximum foreseeable" (different from worst-case) accident, its probability of happening, its potential adverse consequences and its means and costs of remediation. The magnitude of a risk must be calculated from its probability and its consequences; comparisons of risks for each alternative proposed should be done. Stating "*reliable aircraft*" and "*well-documented safety record*" in the DEIS in no way acknowledges or documents the very real potential for a catastrophic flight incident at OLFC.

The DEIS writers somehow found it convenient to withhold important statistics (like the 22 crashes since 2000 of the EA-18G and its closely related F/A-18 E,F aircraft) from the DEIS. It also omitted several aggravating factors at OLFC that are conducive to catastrophic accidents, capable of endangering the civilian populace, the environment, local properties and the pilots themselves. The EIS accident risk analysis for all four action alternatives must include obvious risk factors. Some of these are facility shortcomings, unique Whidbey atmospheric challenges, scheduling compromises, contributors to pilot error like night flying, and the very significant and pernicious Growler technical problem, the hypoxia conundrum (on steady rise in the last eleven years) that continues to dog the Growler, its flyers and its engineers.

Furthermore, an EIS must include with its accident probabilities the potential harms and disruptions resulting from accidents of various levels of complexity and intensity. Since risk is defined as level of consequences multiplied by probability of occurrence, the more flight operations projected the more probability of crashes and the more risk. Omitting a risk analysis falsely engenders a tone of unrealistic optimism that challenges credibility. This DEIS puts forth options to multiply flight operations sixfold (amplifying the probability of crashes *at least* sixfold) yet robotically and blithely pronounces the same "no significant impact" mantra for the far lesser operation hours. Mathematical realism is abandoned: Dramatically amplifying flight operations will severely escalate the probability of a significant deadly, destructive "impact."

This response will consider in detail the following EIS-omitted factors that are amplifiers of, and results of, accident risk. (See further detail below on each of the bulleted items).

Risk Conditions at OLFC

PFOS well contamination connection: There is an important causal connection between crash probability and the probability of water-table contamination by PFOS chemicals. Plane incidents cause PFOS to be applied on the ground in large quantities. Crash risks are discussed in detail in COER Comment #7 and related appendices. Any threatening plane *mishap* may prompt the use of toxic PFOS foam (still stored at OLFC and /Ault Field) to prevent a fire. Because a water table feeding the Coupeville water supply is right underneath the OLFC, the probability of PFOS contamination of the water table by its use on the field (or in the civilian vicinity) should also be calculated. (PFOS chemicals have already entered the water table from past activity so the probability is not zero.) This must be done by multiplying the probability of a fire threatening

mishap at OLFC by the probability that PFOS chemicals sprayed on the field will penetrate to the water table and contaminate it. This is a definite topic for the DEIS that was left out entirely.

The DEIS must state the risk of accidents and their secondary consequences. Dispersal into the water table of the fire-fighting Type B foam with health-endangering, toxic ingredients is one of these. Training and accidents have already injected PFOS chemicals into the Whidbey water table, rendering some vital citizen wells unusable, and endangering the Coupeville water supply (toxins present but barely below a dangerous level). These banned toxins are still being stored for emergency use on Whidbey; increased flight ops will amplify risk of their usage and thus endanger the water table that is directly under the OLFC.